

blade, while its terminal limit is difficult to determine, because growth gradually decreases toward the tip of the blade.

A second paper, by Miss SHELDON,<sup>9</sup> deals with the growth of the stipe. It was found that the region of maximum growth in mature plants is 2-4 feet below the blade, the rate decreasing in both directions. In July the rate of growth was found to be about an inch a day.—J. M. C.

**Ferns of the oriental tropics.**—The richness of the fern vegetation of the tropics is being emphasized by the work of COPELAND.<sup>10</sup> In the papers cited, new species are described in the following genera: *Adiantum*, *Aglaomorpha* (a new subgenus *Holostachyum*, including two other species, being described), *Angiopteris*, *Asplenium*, *Athyrium* (6), *Balantium*, *Cyathea* (6), *Davallia*, *Dryopteris* (6), *Leptochilus*, *Loxogramme* (2), *Marattia*, *Microlepia*, *Oleandra*, *Ophioglossum*, *Polypodium* (8), *Prosaptia*, *Pteris*, *Tectaria* (4), *Trichomanes*, and *Vittaria*. The genera *Diplora* and *Triphlebia* were found to be invalid, because founded upon inconstant and "illusory" features, and should be included in *Phyllitis*, which comprises only three well defined species in the Malay-Polynesian region.—J. M. C.

**Sphagnum bogs of Alaska.**—RIGG<sup>11</sup> has noted the peculiarities of the flora of some Alaskan peat bogs and finds that while sphagnum occurs in many different habitats in Alaska, only where there is an absence of drainage do bogs accompany it. The peat in the bogs visited had a maximum depth of only 2.5 ft. Aside from the sphagnum, *Empetrum nigrum* is the most abundant and uniform in its occurrence, but *Ledum palustre*, *Kalmia glauca*, *Oxycoccus oxycoccus*, and *Drosea rotundifolia* are among other characteristic species. The bogs occur surrounded by treeless areas, by tundras, or by coniferous forests, and vary much in area.—GEO. D. FULLER.

<sup>9</sup> SHELDON, SARAH M., Notes on the growth of the stipe of *Nereocystis Luetkeana*. *Ibid.* 1:15-18. 1915.

<sup>10</sup> COPELAND, E. B., The ferns of the Batu Lawi Expedition. Appendix III. Roy. Agric. Soc. (Straits Branch). no. 63. 71-72. 1912.

———, Some ferns of northeastern Mindanao. Leaflets Philipp. Bot. 5:1679-1684. 1913.

———, Notes on some Javan ferns. Philipp. Jour. Sci. 8:139-145. pls. 2-4. 1913.

———, On *Phyllitis* in Malaya and the supposed genera *Diplora* and *Triphlebia*. *Ibid.* 8:147-155. pls. 5-7. 1913.

———, New Papuan ferns. *Ibid.* 9:1-9. 1914.

———, New Sumatran ferns. *Ibid.* 9:227-233. 1914.

<sup>11</sup> RIGG, G. B., Notes on the flora of some Alaskan sphagnum bogs. *Plant World* 17:176-183. 1914.